MANUAL FOR USE, PROGRAMMING AND MAINTENANCE

WEIGHTING EQUIPEMENT (K)
AT32 SYSTEM

VERSION 13.05.01

CONTENTS

1.- EQUIPMENT COMPONENTS

1- EQUIPMENT COMPONENTS 2

2.- TECHNICAL SPECIFICATIONS

2.1- ESPECIFICACIONES TECNICAS PARTICULARES 3
2.2- LOAD CELLS TECHNICAL SPECIFICATIONS 3

3.- PRECAUTIONS ON INSTALLATION

3.1- WARNINGS 3
3.2- PRECAUTIONS ON INSTALLATION 3

4.- INSTALLATION

4- INSTALLATION 4

5.- PRECAUTIONS FOR USE

5- PRECAUTIONS FOR USE 3

6.- MANUAL FOR USE

6.1.- INDICATORS 5
6.1.1.- ZERO INDICATOR 5
6.1.2.- TARE INDICATOR 5
6.1.3.- MINIMUM WEIGHT INDICATOR 5
6.2.- WEIGHTING OPERATIONS 5
6.2.1.- WEIGHTING 5
6.2.2.- TARE 5
6.2.3.- TARE OFF 5
6.2.4.- ZEROING 5

6.3.- ERRORS 5

7.- MANUAL OF FUNCTIONS AND PROGRAMMATION

7.1.- PROGRAMMING THE PARAMETERS OF COMMUNICATIONS AND WEIGHT 6

8.- EQUIPMENT CONNECTIONS

8.1.- LOAD CELL CONNECTOR 8
8.2.- RS232 CONNECTOR 9
8.3.- ETHERNET CONNECTOR (OPTIONAL) 9

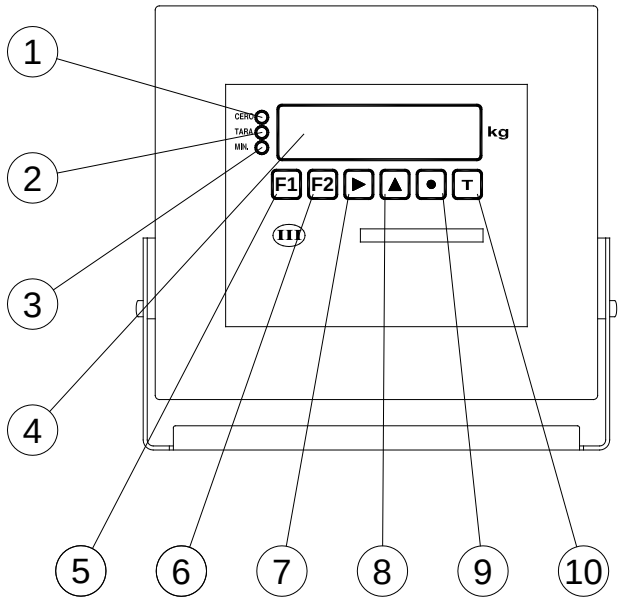
9.- MAINTENANCE

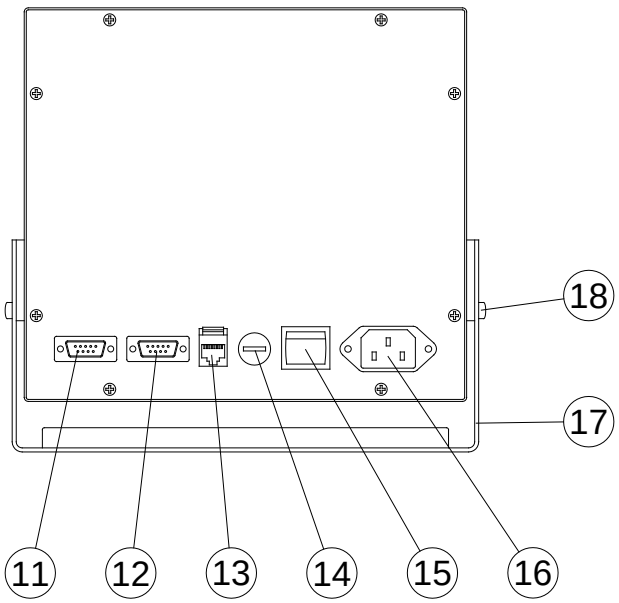
9.1.- CLEANING 9

10.- WHAT TO DO IN CASE OF FAILURE

10.- WHAT TO DO IN CASE OF FAILURE 10

1/ EQUIPMENT COMPONENTES





1- CERO INDICATOR
2- TARE INDICATOR
3- MINIMUM WEIGHT INDICATOR
4- DISPLAY
5- ZERO PUSH BUTTON
6- IP ACTIVATION PUSH BUTTON
7- FORWARD PUSH BUTTON
8- INCREMENTAL PUSH BUTTON
9- DECIMAL POINT PUSH BUTTON
10- TARE KEY
11- LOAD CELL CONNECTOR
12- RS232 CONNECTOR (OPTION)
13- ETHERNET CONNECTOR (OPTION)
14- FUSE HOLDER
15- MAIN SWITCH
16- POWER CORD CONNECTOR
17- SUPPORT
18- SCREW

2/ TECHNICAL SPECIFICATIONS

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

2.1.- TECHNICAL SPECIFICATIONS

NAME	ELECTRONIC WEIHGTING EQUIPMENT MODEL K
TYPE	DESK AND WALL
DIM WxLxH (mm)	220 (W) X 195 (L) X 75 (H)
WEIGHT	2,6 kg
OPTIONS	IP65
RANGE	FROM 6 kg TO 60.000 kg
DIVISIONS	3000 OIML AND UP TO 15000 NO OIML
NOMINAL INPUT VOLTAGE	220 VAC, 50/60 Hz
POWER	Max. 2 W
FUSE	5 X 20 mm, 1 A, 250 V, Type T (slow fussion)
INSTALATION AND OVERVOLTAGE CLASS	II
OPERATING TEMPERATURE	0 ºC / 40 ºC
OPERATING HUMIDITY	20% / 80%

2.2.- LOAD CELLS TECHNICAL SPECIFICATIONS

LOAD CELLS	UP TO 8, 350 OHM
NOMINAL INPUT VOLTAGE	5 VDC
ZERO RANGE	0 TO 6 mV
RANGE INPUT (DOE ZERO)	4 TO 10 mV
OPERATING TEMPERATURE	0ºC / 40ºC
OPERATING HUMIDITY	20% / 80%

3/ PRECAUTIONS ON INSTALLATION

3.1- WARNINGS

READ THESE INSTRUCTIONS CAREFULLY BEFORE YOU PUT THE EQUIPMENT IN OPERATION. CONTAINS IMPORTANT INFORMATION FOR USER'S SECURITY AND EQUIPMENT'S USE. MANUFACTURER ASSUMES NO RESPONSIBILITY IF NOT LOOK THE INSTRUCTIONS OF THE MANUAL.

3.2- PRECAUTIONS ON INSTALLATION

The environmental conditions can affect the performance and accuracy of the equipment. Avoid the following conditions:

- Areas where the temperature and humidity are high or low or positions close to the fire: For example, some boilers, stoves or other sources of heat, water outlets or humidifiers.
- Do not leave your equipment exposed to direct sunlight or in the interior of a closed car: High temperatures could reach to damage electronic components.
- Never work in the rain: In the event of having to work abroad keep your equipment protected under an awning.
- Rapid changes in temperature: Sudden changes in temperature can lead to condensation that can affect the accuracy of the equipment.
- Air flow on the platform, since it can vary the presentation of the equipment.
- Electromagnetic Fields: For example stations or mobile phones, as they may affect the accuracy of the equipment

4/ INSTALLATION

1. Choose a suitable place for installation. Have at least 80cm by the user side to be able to comfortably conduct the operations of heavy, and leaves open the platform for placing and removing loads.
2. Before connecting the equipment to the platform we must levelling the platform, turning the legs and trying to be sitting well.
3. Connect the cable from the platform to the connector (11) of the equipment.
4. Connect the RS232 cable from the computer to connector (12) of the equipment (optional).
5. Connect the RJ45 cable from the computer to connector (13) of the equipment (optional).
6. Insert the supplied power cord into the connector (16) of the equipment by pressing firmly and plug the other end of the cable into a wall socket with appropriate touchdown, the manufacturer assumes no liability for accidents or malfunctions due to the lack of touchdown.
7. Do not connect other devices to the same electrical outlet where the equipment is connected.
8. Turn the bracket (17) by removing screws (18), if you want to tilt to improve visibility of the display.

5/ PRECAUTIONS FOR USE

If the power cord is damaged, contact your nearest dealer for repair: for example cuts or cracks, as there may be a risk of fire or electric shock.

2. The power cord must be connected to the equipment first and then to the outlet, not vice versa. To disconnect the equipment from the power supply must be disconnected from the wall outlet, never from the
equipment
3. Avoid excessive bending and not pull the cord when you disconnect, use the plug.
4. Disconnect the equipment if you're not going to use it for long time period.
5. Do not leave objects too heavy on the platform.
6. To prevent electrical shocks, do not open your equipment, there are no user-serviceable parts inside it. Leave the technical service in the hands of qualified staff.
7. To start work on the equipment turn on the switch (15) located at the rear. If the power fail while the equipment is turned on, with the restoration of the same, the equipment automatically turns on. To turn off the equipment again actuate the switch (15).
8. CAUTION: RISK OF EXPLOSION IF BATTERY REPLACEMENT BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS
9. WARNING: MOVING PARTS. READ THE INSTRUCTION MANUAL. 

6/ MANUAL FOR USE

AL ENCENDER LA MAQUINA EL DISPLAY PRESENTA LA VERSION (Ej. 0v3.0).

TURNING ON THE MACHINE THE DISPLAY PRESENTS THE VERSION (eg 0v3.0). THEREAFTER IS DONE AN INTERNAL VERIFICATION TEST.
IF IS NOT INDICATED ANY ERROR THE EQUIPMENT IS NOW OPERATIONAL.

6.1.- INDICATORS

6.1.1.- ZERO INDICATOR (1)

Lights to indicate the zero of equipment, If there is residue on the platform, the indicator can be turned off and the weight display (4) show zero.

6.1.2.- TARE INDICATOR (2)

Lights to indicate that the equipment is tared.

6.1.3.- MINIMUM WEIGHT INDICATOR (3)

Lights to indicate the area where the percentage error of weight is high (rules).

6.2.- WEIGHTING OPERATIONS

6.2.1.- WEIGHTING
Place the goods on the plate. The weight of the goods is indicated in the weighting display (4)

6.2.2.- TARE (SI ESTA ACTIVADA)
Place the container to Weigh on the platform and press the T (10). The indication of weight will be zero, the tare weight will be indicated in the tare indicator (2). You can increase the the value of tare over a existing tare.

6.2.3.- TARE OFF
Remove any goods which may have been on the platform and the equipment automatically turn off the Tare. The indication of weight will be zero, the zero indicator (1) lights and turns off the tare display (2).

6.2.4.- RESET
In the event that the equipment does not turn off the Tare to remain residue on the platform or any other circumstance, press F1 (5) and equipment recover zero. The maximum effect of this device is 4% of the maximum
(Example 600 g on a platform of 15 kg).

6.3.- ERRORS

Errors that block the balance and have only technical solution

Error in data programming (24C04)	(Show E03)
Weight circuit error (CS5525)	(Show E07)

7/ MANUAL OF FUNCTIONS AND PROGRAMMATION

7.1.- ADJUSTING SETTINGS OF COMMUNICATION AND WEIGHT

When you turn the machine during the test verification

Press key T **(10)** *(Show CO **)* communications mode. Modified by pressing ▲ **(8),** there are 6 modes. *(*Show new mode*)* **always N81**

- **C complete & continuously mode:**
  - Frame <02>XXXX.XXXgXXXX.XXXRXXXXX.XXEXXXXX.XXIXXVXXXXP<byte>L<03>
  - Where <02> is start of transmission, g is the weight in kg with decimals, R is the tare in kg with decimals, E is the price with decimals, I is the amount with decimals, V seller number, P PLU number, L is operation and status byte and <03> is end of transmission.
  - In the operation and status byte, the first four bits indicate the type of operation and the last four of the state flags:
  -

bit7	bit6	bit5	bit4	type operation	bit3	bit2	bit1	bit0
0	0	0	1	no operation	zero	tare	pmin	pfixed
0	0	1	0	operation PPI				
0	0	1	1	operation K				
0	1	0	0	operation K-				
0	1	0	1	operation X				
0	1	1	0	operation X-				
0	1	1	1	operation TOT				
1	0	0	0	open seller				
1	0	0	1	GREAT TOTAL				

- **E stable weight mode:**
  - Frame <02>XXXX.XXXgXXXX.XXXR<03>
  - Where <02> is start of transmission, g is the weight in kg with decimals, R is the tare in kg with decimals and <03> is end of transmission.

- **PO by operation mode:**
  - Frame <02>XXXX.XXXgXXXX.XXXRXXXXX.XXEXXXXX.XXIXXVXXXXP<03>
  - Where <02> is start of transmission, g is the weight in kg with decimals, R is the tare in kg with decimals, E is the price with decimals, I is the amount with decimals, V seller number, P PLU number and <03> is end of transmission.

- **DS on request always mode:**
  - The computer can send two commands: P<CR> to ask for weight o I<CR> to ask for the same frame that in complete & continuously mode.
  - Frame weight _XXXX.XXXg
  - Where _ are white spaces and g is the weight in kg with decimals

- **DE on request with stable weight mode:**
  - The computer can send two commands: P<CR> to ask for the same frame that in stable weight mode or I<CR> to ask for the same frame that in complete & continuously mode.

- **T6 protocol for repeaters BACSA.**

- **T7 stable weight plus LF (Line Feed)**
  - Frame <02>XXXX.XXX<0A><0A><0A><0A><0A><0A><0A>
  - Where <02> is start of transmission, X is the weight in kg with decimals and <0A> are the Line Feed (LF).

- **T8 protocol $**
  - The computer send $ to ask for the frame.
  - Frame XXXX.XXX<CR>
  - Where XXXX.XXX is the weight in kg with decimals and <CR> is end of transmission.

- **T9 on request always mode, with an indication of stable weight and CHECKSUM calculated in hexadecimal and sent two ASCII characters.**
  - The computer send I<CR> to ask for the frame.
  - Trama <02>XXXX.XXXgXXXX.XXXRXXXXX.XXEXXXXX.XXIXXVXXXXP<byte>L<CS><03>
  - Donde <02> es comienzo de transmisión, g indica el peso en kg con decimales, R la tara en kg con decimales, E el precio con decimales, I el importe con decimales, V el numero de vendedor, P el numero de PLU, L un byte de tipo de operación y estado, <CS> el cheksum de los datos enviados Y <03> fin de transmisión.
  - En el byte de operación y estado el primer bit indica estabilidad, los tres siguientes el tipo de operación y los cuatro últimos el estado de los flags:

bit7	bit6	bit5	bit4	type operation	bit3	bit2	bit1	bit0
stable	0	0	1	no operation	zero	tare	pmin	pfixed
	0	1	0	operation PPI				
	0	1	1	operation K				
	1	0	0	operation K-				
	1	0	1	operation X				
	1	1	0	operation X-				
	1	1	1	operation TOT				
	0	0	0	open seller				
	0	0	1	GREAT TOTAL				

- **TA stable weight plus LF (Line Feed) when weight is stable pressing F2.**
  - The same frame or the T7 mode but pressing the F2 key when the weight is stable

- **N never sends data.**

IN CASE OF BE ON THE SERIAL NUMBER, THE FRAMES ARE EXTENDED SO:

XXXXXNS where X represents the serial number and N and S is to indicate serial number.

- **C complete & continuously mode:**
  - Frame <02>XXXX.XXXgXXXX.XXXRXXXXX.XXEXXXXX.XXIXXVXXXXP<byte>LXXXXXNS<03>

- **E stable weight mode:**
  - Frame <02>XXXX.XXXgXXXX.XXXRXXXXXNS<03>

- **PO by operation mode:**
  - The same frame of complete & continually mode each time an operation is performed.

- **DS on request always mode:**
  - The computer can send two commands: P<CR> to ask for weight o I<CR> to ask for the same frame that in complete & continuously mode.
  - Frame _XXXX.XXXgXXXXXNS

- **DE on request with stable weight mode:**
  - The computer can send two commands: P<CR> to ask for the same frame that in stable weight mode or I<CR> to ask for the same frame that in complete & continuously mode.

- **T6 protocol for repeaters BACSA.**
  - This protocol is unchanged even if a serial number programmed

- **T7 stable weight plus 7 LF (Line Feed)**
  - Frame <02>XXXX.XXXXXXXXNS<0A><0A><0A><0A><0A><0A><0A>
- **T8 protocol $**
  - The computer send $ to ask for the frame.
  - Frame XXXX.XXXXXXXXNS<CR>
- **T9 on request always mode, with an indication of stable weight and CHECKSUM calculated in hexadecimal and sent two ASCII characters.**
  - Frame <02>XXXX.XXXgXXXX.XXXRXXXXX.XXEXXXXX.XXIXXVXXXXP<byte>LXXXXXNS<CS><03>
- **TA stable weight plus LF (Line Feed) when weight is stable pressing F2.**
  - Frame <02>XXXX.XXXXXXXXNS<0A><0A><0A><0A><0A><0A><0A>
- **N never sends data.**

Press ▶ **(7)** *(Show d ***) Current turn off delay.*
Increases by pressing ▲ **(8)**, range 1 to 30 and off. *(Show new delay)*

Where *** is the time in minutes that takes the machine go low consumption when not performed any function. It should be used only on machines with internal battery for longer battery life, in other machines must be turned off (OFF). When the machine enters Low Power has a hyphen in the weight indicator and is reactivated by pressing any key. To exit the programming mode, press T (10).

Press ▶ **(7)** *(Show tArA*)*
Is modified by pressing ▲ **(8)**,, values 0 and 1 *(Show new value)*
Where 1 indicates that the tare is activated and 0 that the tare is deactivated.

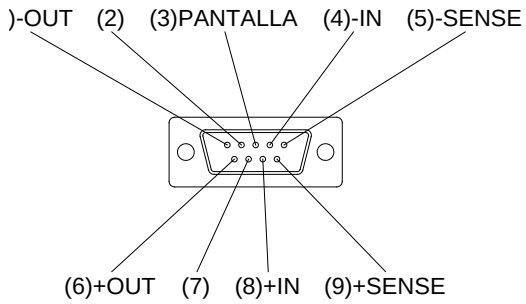
Press ▶ **(7)** *(Show F *) strength of the filter.*
Increases by pressing ▲ **(8)**, range 1 to 5. *(Show new strength of the filter.)*
Where * is the number of times that it average the divisions of the converter for filtering result (usually 2). To exit the programming mode, press T (10).

The weight adjustment can be performed only by AUTHORIZED PERSONNEL AND ACTIVATES IT UNDER ELECTRONIC KEY.

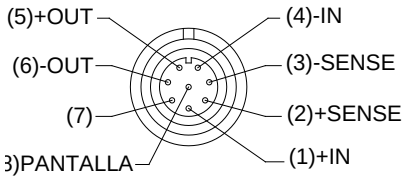
8/ CONEXIONES DEL EQUIPO

8.1.- LOAD CELL CONNECTOR

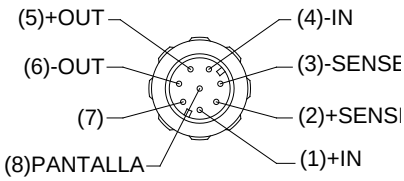
STANDARD



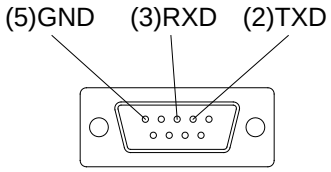
IP65



AEREAL IP65



8.2.- RS232



8.3.- EHERNET CONNECTOR (OPTIONAL)

To connect to the balance through the local network or Internet, the machine must have an IP address, as the machine does not have sufficient keyboard and display, recording the IP address of the machine performing Web, making it necessary to have some initial IP address can connect to the machine and set the IP.

When you turn the machine during the test verification

Press key **F2 (6)** *(Show COd *) 0 default IP 1 factory IP.*

Press ▲ **(8)** to change the mode, if you enter 1, will take the factory IP:

IP ADDRESS	191.168.1.50
IP MASK	255.255.255.0
IP GATE	192.168.1.0
PORT	8080

To exit, press F2 (6), turn off and on the machine to take the new value.

With this IP we can connect now the balance (see manual ETHERNET) and, from Internet, change the IP. Once we have programmed the IP back to turn off and on the balance to take the new IP and now we can connect with that IP.

9/ MAINTENANCE

9.1.- CLEANING

- Before cleaning the equipment disconnect from the power.
- The equipment has plastics materials. To perform the cleaning, never use gasoline, thinners or other chemicals products, since it could change the colour and damage the surface of these materials.
- Clean the body of the equipment with a soft, clean cloth for cleaning difficult stains, use a wet cloth in a solution of mild soap and water
- To clean the platform can use a wet cloth if the plate is stainless steel.

10/ WHAT TO DO IN CASE OF FAILURE

BEFORE YOU CALL FOR TECHNICAL ASSISTANCE, MAKE SURE:

- **THE EQUIPMENT NOT LIGHT**

  1. If your equipment does not turn on, verify the power.
  2. Make sure the power cord is connected to the plug from the outlet.
  3. Make sure the power switch (15) is in on position.
  4. Check fuse(14).

- **THE EQUIPMENT SHOW [-0-]**

  1. Check for any goods on the platform.
  2. Check for air flow

- **THE EQUIPMENT HAS ANY OTHER KIND OF ERROR**

  1. Any other type of error check with technical service.

TO CONTACT THE NEAREST SERVICE, CALL YOUR DEALER OR TELEPHONE +34 96 150 09 11.

DEALER